## **CLAIMS:**

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- 1. Apparatus for detecting an object, the apparatus comprising:
  - a light source adapted to emit a beam of light at wavelengths absorbed by the object or a coating thereon;
  - a detector adapted to detect light at wavelengths fluoresced by the object or coating thereon; and
  - a processor adapted to determine the presence of an object from the light detected by the detector.
- 2. Apparatus as claimed in claim 1, further including an oscillator to modulate the light source.
  - 3. Apparatus as claimed in claim 2, further including a driver circuit.
  - 4. Apparatus as claimed in claim 2 or claim 3, wherein the processor includes a mixer, which receives the modulation signal from the oscillator, and a signal from the detector.
- 5. Apparatus as claimed in claim 4, wherein the processor further includes a low-pass filter which is adapted to pass signals of a significant magnitude if a coherent signal averaged over time is present.
  - 6. Apparatus as claimed in claim 5, wherein the processor further includes a threshold detector, which compares the signal from the low-pass filter with a predetermined threshold, and sends a signal to an indicator is the signal exceeds the threshold, to indicate the presence of a ball.
  - 7. Apparatus as claimed in claim 2 or any one of claims 3 to 6 as dependent upon claim 2, wherein the modulation will be in the frequency range 10 Hz to 100 MHz.
- 8. A method for locating lost objects, the objects having a coating which absorbslight at one wavelength, and fluoresces at a second wavelength; the method consisting in the steps of:
  - providing a bead of light having a wavelength absorbed by the coating on the object;
  - detecting light of wavelengths fluoresced the object to be located; and
  - determining from the light detected the presence or otherwise of the object.